

## **REMARKS/ARGUMENTS**

### **CLAIM REJECTIONS – 35 USC § 103**

#### **U.S. Pat. No. 6,040,272 in view of U.S. Pat. Nos. 5,665,672 and 2,947,111**

Claims 1-29 under 35 U.S.C. § 103(a) have been rejected as being unpatentable over Riego, et al., U.S. Patent No. 6,040,272 in view of Lucas, U.S. Patent No. 5,665,672 and further in view of Zobrist, et al., U.S. Patent No. 2,947,111.

Reconsideration is respectfully requested. To begin with, the Office Action states “using a systemic fungicide allows the bark of the tree to completely absorb the composition.” But, no support or authority is provided for this statement. As those skilled in the art understand, this is in fact not the case. Systemic fungicides include those fungicides that operate by moving through the vascular system of plants. To be effective, however, these chemicals must enter into the vascular system of the plant. As taught by Zobrist (and the Applicant in the background), several paths to the vascular system exist. For example, systemic fungicides can enter the vascular system by uptake through the root system. Or, systemic fungicides can enter the vascular system through foliage absorption.

Through-bark penetration of fungicides into the vascular system of trees does not exist in the prior art. In this respect, the teachings of Zobrist, when considered as a whole, support the patentability of the claimed invention. That is, Zobrist corroborates the Applicant’s background, which teaches that through-bark penetration of fungicides into the vascular system of trees has not been achieved as evidenced by the common practice in the art of mechanically penetrating the bark of trees in order to deliver systemic fungicide to the vascular system of trees. Zobrist teaches this practice at column 1, lines 45-65<sup>1</sup>. Zobrist offers an alternative to mechanical penetration of the

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<sup>1</sup> Applicants acknowledge that column 1, lines 30-35 teach “with liquid systemic fungicides or emulsions or solutions of systemic fungicides, the spray application of these liquids to the growing tree will frequently permit enough absorption to give systemic protection.” But, this teaching cannot be construed as a through-bark application inasmuch as those skilled in the art appreciate that through-bark application of systemic fungicides is ineffective and those skilled in the art understand that systemic fungicides have been applied by spraying the foliage of trees. Therefore, the only thing that can be gleaned from this statement is an acknowledgement that a foliar application of systemic fungicides was practiced in the prior art.

bark by constructing an elaborate system of wraps and fibrous wadding to prepare a water impervious annular ring around the trunk of a tree, and pouring a systemic fungicide solution into this ring and sealing the same within the assembly. See column 2, lines 15-40. By use of this elaborate assembly, the systemic fungicide is maintained in contact with a portion of the bark. See column 2, lines 1-5.

Not only is the method taught by Zobrist highly distinct from the claimed invention, it is not analogous to the teachings of either Riego or Lucus. On the one hand, Zobrist does not teach, suggest, or contemplate the use of an organosiloxane surfactant. Nor does Zobrist teach, suggest, or contemplate the use of a phosphite fungicide as set forth in several of the Applicant's claims. On the other hand, Riego is concerned with applying an aqueous solution to the bark of trees by use of backpack sprayers or similar equipment. See column 8, lines 1-5. In this respect, Applicant does not believe that one of skill in the art would be inclined to combine the teachings of Riego with those of Zobrist. Indeed, if a systemic fungicide was capable of penetrating bark (as suggested in the Office Action), then there would be no need, desire, or motivation to go through the trouble of preparing an elaborate assembly as taught by Zobrist.

Nor do the teachings of Lucus undermine the patentability of the claimed invention. While Lucus teaches systemic fungicides (including phosphite compounds), the compositions taught by Lucus are formulated for turfgrass and are applied thereto by spraying. As those skilled in the art appreciate, turfgrass does not include bark and therefore application of aqueous compositions to turfgrass is analogous to foliar application of fungicides. Thus, not only does Lucus fail to teach or suggest the application of phosphite compounds to trees, Lucus also fails to teach application to bark.

Furthermore, while Riego teaches that the combination of herbicide and organosiloxane allows for the through-bark application of herbicide to trees, the Applicant maintains that this teaching or technology cannot be extended to other agricultural chemicals with any level of predictability. Many factors support the

Applicant's position in this regard including the vast differences that exist between various agricultural chemicals. For example, those skilled in the art appreciate that fungicides and herbicides are entirely different chemicals. Herbicides are employed to kill plants. In contradistinction, fungicides are used to sustain and promote plant life. Therefore, since the goal of Riego was to kill plant life, the Applicant maintains that one of skill in the art would not —with any degree of predictability— employ the teachings of Riego in combination with fungicidal chemicals. While Applicant unexpectedly discovered that the combination of fungicide and organosiloxane provide technical benefit, any allegation that this combination would have been obvious necessarily relies on improper hindsight.

The Applicant also believes that the patentability of claims 12-15 must be separately considered. These claims recite that the systemic fungicide is a phosphite compound. The Applicant's discovery that these compounds could be combined with organosiloxanes to produce useful compositions was highly unexpected. As those skilled in the art appreciate, organosiloxanes, particularly those including polyoxyalkylene substituents, are organic compounds. On the other hand, phosphite compounds — particularly those claimed— are exclusively or predominately inorganic compounds. Those skilled in the art understand that organic compounds and inorganic compounds are often not compatible. Surprisingly, however, their combination in the present invention yields a useful solution. This discovery, however, would not have been predicted by one of skill in the art prior to the Applicant's invention.

In support of Applicant's position, the declarations of Mr. Franklin E. Sexton and Mr. Todd O'Connell are included herewith. In particular, these declarations establish that those skilled in the art would not have predicted the success found by the Applicant in the present invention. Specifically, they establish that the through-bark application of fungicides in order to systemically treat trees did not exist in the prior art. And, while both declarants are familiar with Riego, the same would not have lead to a predictable result by employing fungicide in lieu of herbicide. As noted above, these agricultural chemicals are entirely distinct. Moreover, and as explained by Mr. O'Connell, the ability

to blend organic compounds (such as the organosiloxane surfactants) and inorganic compounds such as phosphite compounds adds even more unpredictability and further bolsters the unexpected nature of the present invention.

**CONCLUSION**

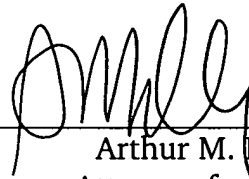
It is respectfully submitted that all pending claims are in condition for allowance. Accordingly, Applicant request early and favorable reconsideration in the form of a Notice of Allowance.

If necessary to affect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to affect a timely response. Please charge any deficiency in fees or credit any overpayments to Deposit Account No. 18-0987 (Docket #: QST.P.US0001).

Respectfully submitted,

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Date



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